

PRELIMINARY REPORT

2015: I1-I5 – Texas Medical Center

APPLICANT: City of Houston Planning & Development

KEY MAP: 492-493, 532-533

JURISDICTION: City of Houston

LAMBERT: 5255, 5354-5356

DISTRICT/PRECINCT: City Council: C, D, K
Harris County Pct.: 1

PROPOSAL:

The City of Houston Planning & Development Department (P&D) is requesting the reclassification of the following Thoroughfares and Collectors within the Texas Medical Center (TMC) Mobility Study:

	ID	STREET NAME	STREET SEGMENT	AMENDMENT REQUEST
I	1.	Dryden Road	Main Street to Fannin Street	Add Dryden Road between Main Street and Fannin Street as a Major Collector (MJ-4-70)
	2.	Fannin Street	S Braeswood Boulevard to Greenbriar Drive	Reclassify Fannin Street between S Braeswood Boulevard and Greenbriar Drive from a 6 lane Principal Thoroughfare (P-6-100) to a 4 lane Major Thoroughfare (T-4-100)
	3.	Hermann Drive	Main Street to Almeda Road	Reclassify Hermann Drive between Main Street and Almeda Road from a Major Thoroughfare (T-4-80) to a Major Collector (MJ-2-80)
	4.	MacGregor Drive	Almeda Road to SH 288	Reclassify MacGregor Drive between Almeda Road and SH 288 from a Major Thoroughfare (T-4-70) to a Major Collector (MJ-2-70)
	5.	Holcombe Boulevard	SH 288 to S. Braeswood Boulevard/N. MacGregor Way	Reclassify Holcombe Boulevard between SH 288 and S. Braeswood Boulevard/N. MacGregor Way from an 80' right-of-way Principal Thoroughfare (P-6-80) to a 100' right-of-way Principal Thoroughfare (P-6-100)

BACKGROUND INFORMATION:

The Texas Medical Center (TMC) in conjunction with the City completed the Texas Medical Center Mobility Study in 2014 in a continued effort to advance the recommendation from the City Mobility Planning (CMP) Phase I (See the appendix for more information). The TMC is the largest medical center in the world with 92,500 employees located just south of Downtown Houston. The primary study area is bounded by Hermann Drive/Sunset Boulevard to the north, Almeda Road to the east, Holly Hall Street to the south, and Greenbriar Drive to the west. The purpose of the study was to determine appropriate multi-modal solutions to address the near and long-term mobility needs of the TMC study area.

Most of the thoroughfares evaluated within the study have existed on the MTFP since its inception in 1942. Despite the introduction of the freeways (US 59 and SH 288) that limited connectivity with adjoining areas, the urban street grid characteristic of the area north of Holcombe Boulevard has remained relatively intact. The area surrounding the TMC has experienced tremendous growth over the years with TMC's expansion of its south campus and redevelopment of nearby neighborhoods/properties for supporting uses. This trend is projected to continue. By 2035, employment in the TMC area is projected to grow by almost

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60% to over 166,000 jobs, according to Houston-Galveston Area Council (H-GAC). On the contrary, a modest growth in population (14%) is expected during the same time period.

TMC Population and Employment Projections

Year	Population	Population Density (Persons/Acre)	% Change	Jobs	Job Density (Jobs/Acre)	% Change
2012	25,804	13.5	-	104,790	54.9	-
2035	29,439	15.4	14.1%	166,731	87.3	59.1%
Change 2012 to 2035	3,635	1.9	14.1%	61,941	32.4	59.1%

Source: Demographic Projections by H-GAC

The TMC study area consists of a number of Major Thoroughfares and Collectors that provide access to and from the freeways and within the area. Access to the TMC is further enhanced by the METRO Red Line and many buses that provide travel options for employees, students, and visitors from all over the greater Houston region. As one of the largest activity centers in the region, many of the thoroughfares in the TMC area are over capacity and experience heavy congestion. Unlike the central business district, the TMC private and public street grid does not have the same uniformity to effectively distribute traffic. The block sizes in the area are very large and circulation within these large blocks is typically provided by private streets. In addition, Rice University Campus and Hermann Park present another challenge to street connectivity, which burdens the existing thoroughfares. Over the next 20 years, TMC plans to add another 28 million square feet of healthcare-related developments that will bring more visitors which requires more parking, wider roads and more travel options to serve this demand. Given the limited right-of-way and the cost associated with new road construction, there is a great need for multi-modal solutions to meet the growing travel demands in the TMC area. See the appendix for corridor specific recommendations from the TMC Mobility Study.

The Texas Medical Center Mobility Study report can be found on the City's webpage:
<http://www.publicworks.houstontx.gov/tod/tmcstudy.html>.

Information about City Mobility Planning (CMP) can be found on the City's webpage:
<http://houstontx.gov/planning/mobility/cmp>

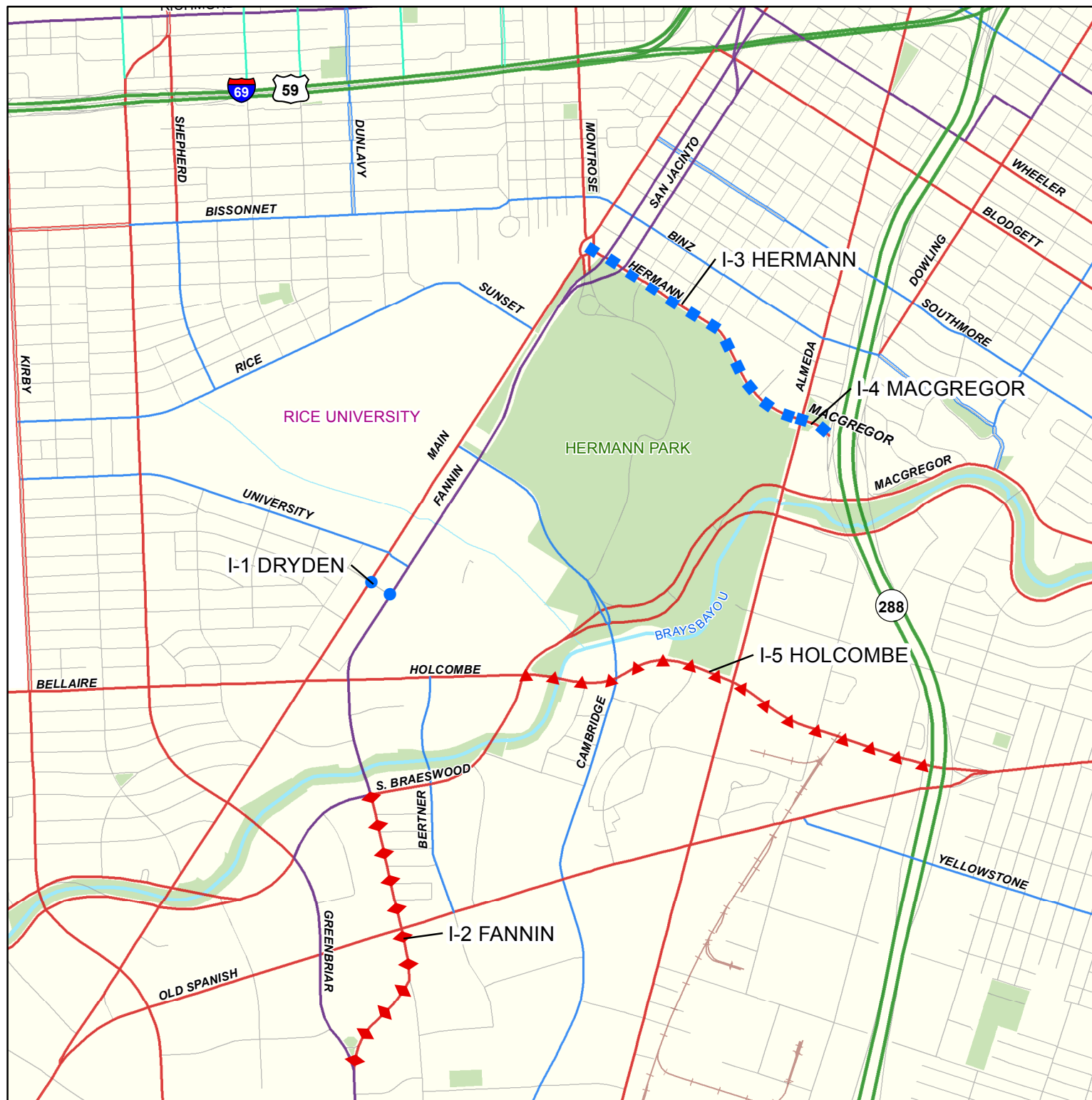
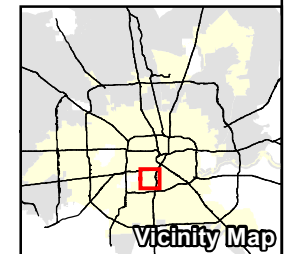
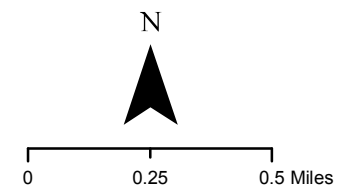
2015 Major Thoroughfare and Freeway Plan Amendment Request: Texas Medical Center: I-1 - I-5

2015 MTFP Amendment Requests

- Add —●—
- Realign —○—
- Remove —X—
- Reclassify
 - Street Class —■—
 - ROW Width —▲—
 - No. Lanes —◆—

2014 MTFP

- Freeway ———
- Major Thoroughfare ———
- Major Collector ———
- Minor Collector ———
- Transit Corridor Street ———
- Local Street ———
- Railroad —+—
- Waterway ———
- Park —■—
- Houston City Limit —■—
- Houston ETJ —■—
- County Boundary —■—



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PRELIMINARY REPORT APPENDIX

- **Mobility Study Project Sheets**
- **City Mobility Planning**

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5.2.8 University Boulevard and Dryden Street

Limits: Main Street to Fannin Street



Existing Conditions

University Boulevard is an east-west major collector road from Kirby Drive in the west to Fannin Street in the east. Dryden Road is an east-west local street from Greenbriar Drive to Fannin Street. Both University Boulevard and Dryden Road are two-way undivided roadway with one lane in each direction. The posted speed limit is 30 mph along the two roadways.

Issues and Needs

Fannin at University was observed to be operating at LOS F in the AM peak hour and LOS E during PM peak hour. The northbound and southbound traffic is moderate. However, the westbound left turning traffic is experiencing high delays during AM peak hour and eastbound left turning traffic is heavy during PM peak hour. In addition, the intersection of Fannin at University experienced heavy delays during the AM peak hour. During peak hours, Dryden Street served as a cut-through street for commuting traffic causing noise and safety issues to nearby neighborhood.

Future Vision

The proposed short-term improvement is to convert University Drive and Dryden Street to a one-way pair between Fannin Street and Main Street. University Boulevard will operate as a one-way street in the westbound direction and Dryden will operate as a one-way street in the eastbound direction. In order to ensure progressive traffic flow along Main Street following the conversion of University Boulevard and Dryden Road, signal timing for the intersections along Main Street between Holcombe Boulevard and Sunset Boulevard will be optimized, as required. After these implementations, intersections of Fannin at university, Fannin at Dryden, and University at Main will get improved significantly.

EXISTING CONDITIONS		FUTURE CONDITION		EXISTING CONDITIONS		FUTURE CONDITION	
University Boulevard		One-way Westbound		Dryden Road		One-way Eastbound	
Existing Lanes	2	Future Lanes	4	Existing Lanes	2	Future Lanes	4
Existing Counts Range	34600	Future Volume Range	49700	Existing Counts Range	N/A	Future Volume Range	N/A
Right-of-way	60'-70'	Proposed MMC	Couplet	Right-of-way	60'-80'	Proposed MMC	Couplet
Median/CTL/Undivided	Undivided	Median/CTL/Undivided	Undivided	Median/CTL/Undivided	Undivided	Median/CTL/Undivided	Undivided
MTFP Designation	C-2-70	MTFP Designation	C-4-70	MTFP Designation	N/A	MTFP Designation	C-4-80

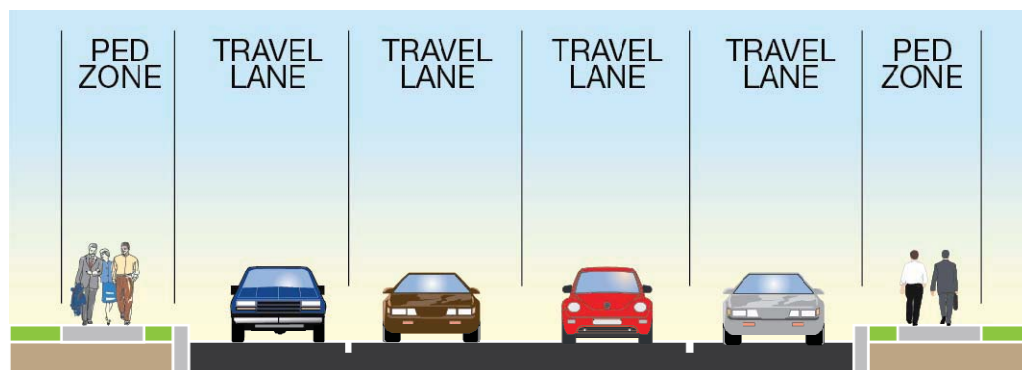


FIGURE 5.9
TYPICAL SECTIONS FOR UNIVERSITY BOULEVARD AND DRYDEN STREET

5.2.1 Holcombe Boulevard

Limits: Main Street to Alameda Road



Existing Conditions

Holcombe Boulevard is an east-west major thoroughfare that bisects the TMC. It runs from just east of SH 288 where it connects to Old Spanish Trail west through the TMC to Edloe Street where it becomes Bellaire Boulevard. In the study area, Holcombe Boulevard is three lanes in each direction with left turn-lanes at the intersections and a landscaped median. The posted speed limit on Holcombe Boulevard in the study area is 30 mph.

Issues and Needs

Holcombe carries a large amount of traffic, which ranges approximately from 25,000 to 33,000 daily. The eastbound traffic is heavy during AM peak hour and westbound traffic was high and experiencing high delays during PM peak hour. In terms of intersection LOS, The intersections of Fannin at Holcombe, Holcombe at Richard JV Johnson, Holcombe at Alameda Road, and Holcombe at Main Street were all observed to be operating at LOS F during both AM and PM peak hours.

Future Vision

Short-term improvements will include adding left-turn bays, reconfiguring lanes, and optimizing signal timings for those intersections operating at LOS E or F. There are also intersection accessibility improvements such as adding curb ramps at Holcombe at Fannin and Holcombe at Main. After the implementation of improvements above, those intersections will operate at levels of service D or better. Mid-term improvements, which include adding left-turn bays, will be implemented on the intersection of Alameda at Holcombe. LOS at that intersection will be brought to D. For the long term improvements, conceptual options analyzed were widening roadway, elevated expressway, grade separation at selected intersections, and a new transportation terminal. Analysis details are included in Appendix A. Given the context of the study area as a high density urban activity center and input from stakeholders and general public, the corridor is envisioned to retain its current urban boulevard characters with high frequency transit. To accommodate the projected mobility needs, improvements such as corridor access management and grade separation at certain intersections may be needed. Further assessment and design consideration will be required to develop specific improvement options that fit the area context and serve multimodal needs along the corridor.

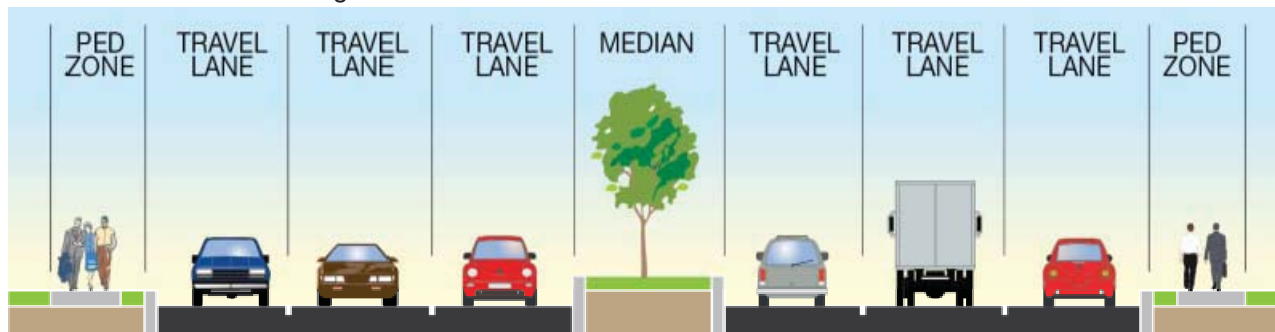


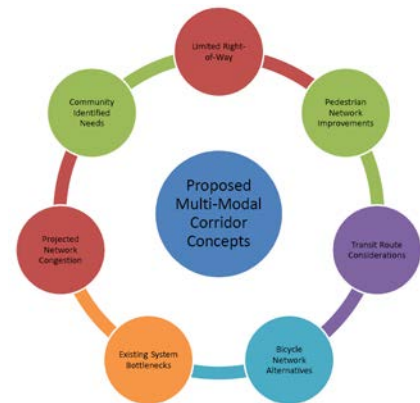
FIGURE 5.2
TYPICAL SECTION FOR HOLCOMBE BOULEVARD

APPENDIX

City Mobility Planning

In 2009, the City of Houston adopted the City Mobility Plan (CMP), which proposed a new process for developing mobility solutions. These solutions focus on capitalizing on current transportation infrastructure by emphasizing multi-modal mobility options and system improvements with a higher than average benefit-cost ratio. Historically, we have addressed increased traffic by simply expanding our streets or network capacity. This methodology simply isn't sustainable given limited funding sources, quality of life factors, and constraints on land development.

With expected growth in the study areas, several of the corridors will continue to see increased congestion within the next 25 years, and the limited rights-of-way will preclude several corridors from increasing their through-put capacity by simply widening the street. As such, the City of Houston is taking a holistic approach to defining a vision for these corridors. All modes of travel will need to be accommodated in some form or fashion within each of the study areas. By using the concepts defined within the *Infrastructure Design Manual, Chapter 10, Appendix 2*, the City is taking its first step in trying to create a multi-modal vision for the corridors within the study areas. Resulting recommendations are evidence of a balanced approach that took many City resources into consideration, including: Existing Conditions Analysis, Public Engagement, Stakeholder Engagement/Oversight, and modeling scenarios which specifically targeted attempts in vehicular congestion evaluation and network solutions.



Based on expected growth, limited room to build new or expand existing roads, increase in projected congestion, and a desire for the City to find a more multi-modal oriented solution to the City's ever-pressing traffic concerns, the following recommendations were made. Local street recommendations were provided to preserve and tighten the existing grid to eliminate the possibility of future roadway abandonment or alteration of local streets, allowing for the continued preservation of the corridors while enhancing the importance of alternative modes of transportation, such as bikes.

For more information about City Mobility Planning, visit the City of Houston's Mobility page at <http://houstontx.gov/planning/mobility/cmp>.

Other Planning Studies

In addition to City Mobility Planning efforts, the City of Houston makes annual amendments to their Major Thoroughfare and Freeway Plan, supports the development of the City's Transportation Policy and Regulations, provides technical support to the City's Transportation Advisory Committee and maintains the City's Travel Demand Model. To find more studies that the City of Houston has been involved in, visit their Mobility webpage at <http://houstontx.gov/planning/mobility/>.

The City of Houston also coordinates with the Houston-Galveston Area Council and other transportation agencies within the region and pursues federal funding opportunities for transportation planning studies and public-private partnerships. To review transportation and other planning studies (related to business and economic development, community, emergency/disaster planning, environment, mobility, and public safety), visit the Houston-Galveston Area Council's webpage at <http://www.h-gac.com/home/residents.aspx>.